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EXAMINER	
RUTTEN, JAMES D	

ART UNIT	PAPER NUMBER
2192	

DATE MAILED: 06/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/046,389	BERGER ET AL.	
	Examiner	Art Unit	
	J. Derek Rutten	2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 March 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to Applicant's amendment dated 3/1/2006, responding to the 11/1/2005 Office action provided in the rejection of claims 1-20, wherein claims 1-3 and 6-15 have been amended. Claims 1-20 remain pending in the application and have been fully considered by the examiner.

2. Applicant essentially argues that the Chiang reference does not disclose automatic code generation. This argument is not persuasive, as addressed in the *Response to Arguments* section below.

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Response to Amendment

4. In an amendment to the specification, appearing on page 2 of the response filed 15 April 2005, there is an instruction to "replace all references from attorney docket number "014600-0003 (B69393) to - 14039-0004 –". However, this does not conform to 37 CFR 1.121(b) which states:

> Amendments to the specification, other than the claims, computer listings (§ **1.96**) and sequence listings (§ **1.825**), must be made by adding, deleting or replacing a paragraph, by replacing a section, or by a substitute specification...

This section further requires that such amendments be made by an instruction that unambiguously identifies the location of such amendments. Applicant's amendment does not replace a paragraph or section, and does not unambiguously identify the location of the amendment. Clarification is required. It should be noted that this paragraph was included in a prior Office action, but has not been addressed in the reply filed 3/1/06.

5. On page 3 of the amendment, claim 3 is listed as "Original", yet contains amendments to the claim. This does not conform to 37 CFR 1.121(c)(2) which states:

> All claims being currently amended in an amendment paper shall be presented in the claim listing, indicate a status of "currently amended," and be submitted with markings to indicate the changes that have been made relative to the immediate prior version of the claims.

It is not clear if this claim is intended to be the original form, or if it should be amended. In the interest of further examination, this claim will be regarded as "Currently Amended". Further submissions must comply with 37 CFR 1.121.

6. Applicant's amendments have overcome prior objections to the specification, the rejections of claims 3, 8, and 15 under 35 USC § 112, first paragraph, and the rejection of claims 6, 7, 13, and 14. Thus, these objections and rejections are withdrawn. However, upon further consideration, a new ground of rejection is made in view of new prior art as applied below.

Response to Arguments

7. Applicant essentially argues in the last paragraph on page 8 continuing on page 9, that present claim amendments obviate the rejection of claims 1-7 under 35 USC 112, second paragraph. This argument is not entirely convincing. Amendments to claim 1 are directed toward automatic generation of user interface features and states, in contrast to automatic generation of code as argued by the Applicant. Applicant argues that such automatic code generation eliminates manual programming. Since Applicant argues that programming is eliminated by automatic code generation, and the claims do not appear to generate code automatically, the invention as argued by the Applicant, is not claimed in claim 1. However, amendments to claim 2 appear to be directed to automatic code generation. Claim 4 is dependent upon claim 2. As such, the argument as related to claims 2 and 4 is persuasive, and the rejection of those claims is withdrawn. However, the rejection of claims 1, 3, and 5-7 is maintained.

8. Applicant essentially argues on page 9 that the prior art does not disclose automatic code generation, and that rejections under 35 U.S.C. §§ 102 and 103 should be withdrawn. However, as discussed above, claims 1, 3, and 5-7 do not contain limitations that are directed to automatic code generation. Thus, for these claims at least, the argument is not persuasive. The remaining claims 2, 4 and 8-20 do appear to be related to automatic code generation as argued by the Applicant. However, while Chiang does not disclose the "elimination of manual programming", Chiang does disclose a web application generator that "automatically" produces source code

output. See at least paragraph [0052] on page 4 along with Figures 6 and 7. As such, the reference meets the language of the claims, and the argument is not convincing.

Specification

9. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The "multi-tier architecture" of claim 15 is not present in the specification.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 15-20 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

12. Claim 15 includes the following limitation: "a primary code editor automatically modifying one or more classes". While the originally filed specification provides a description of a primary code editor that allows a user to modify primary code (see page 35 lines 14-21), no support could be found for a primary code editor that *automatically* modifies classes. It is not evident that an editor would be able to *automatically* modify classes. For the purpose of further

examination, this limitation will be interpreted in light of the specification, as an editor that allows a user to modify code.

13. Claim 15 includes the following limitation: "a multi-tier architecture of the developer software code". While the originally filed specification provides a description of a "layered code generation architecture" (see page 12 lines 3-8), no support is found for a developer software code that has a multi-tier architecture. In relation to the modified classes of claim 15, the developer code could be viewed as being a layer, or "tier" in the layered architecture. However, it is not clear how a single developer software code could have a multi-tier architecture. For the purpose of further examination, this limitation will be interpreted as --compatible with other tiers in a multi-tier architecture *that includes* the developer software code--.

14. Claims 16-20 are rejected as being dependent upon a rejected base claim.

15. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

16. Claims and 1 and 3-7 rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. Evidence that claims 1 and 3-7 fail to correspond in scope with that which applicant(s) regard as the invention can be found in the reply filed 3/1/06. In that paper, applicant has stated "the pending claims cover automatic generation of code which the prior art discloses must be manually generated", and this statement indicates that the invention is different from what is defined in the claim(s) because these claims do not contain any limitations which would provide for the elimination of manual programming by automated code generation. While an amendment to claim 1 includes automatically generated

states and features, this is different from automatically generated code. Automatically generated states and features is an inherent feature of any computer generated GUI, and does not distinguish the claim from the prior art.

Claim Rejections - 35 USC § 102

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

18. Claims 1-3, 5, 8-10, 12, 15, 17, 18, and 20 are rejected under 35 U.S.C. 102(a) as being anticipated by U.S. Patent Application Publication US 2001/0037490 A1 by Chiang (hereinafter "Chiang").

In regard to claim 1, Chiang discloses:

A system for generating user interface code (See FIG. 2) *comprising:*

a user interface class system generating user interface class code, wherein the user interface class code includes two more user interface features that can be selected and assembled into a user interface by a user; See paragraph [0037]:

> As shown in FIG. 5, the first step comprises one or multiple graphic designers and/or business analysts 210 creating web application screens using visual editors or a text editor (step 505). In one embodiment, the application screens are written in HTML format using a visual HTML editor, such as Microsoft FrontPage, Adobe GoLive or Netscape Composer.

Also see paragraph [0052]:

> As illustrated in FIG. 6, the web application generator 205 reads the set of web application screens as the input 605 and generates web application source code 610 as the output.

Also paragraph [0062]

> In one embodiment, web application source code output 610 is generated as a corresponding Java class.

Also see paragraph [0095].

a handler class system generating handler class code, wherein the handler class code includes one or more states for each user interface feature of the user interface class. See page 3 paragraph [0026] and FIG. 2 as cited above; also paragraph [0035] and FIG. 4 element 415: "Event Handler". Also paragraph [0057]:

> Ultimately, based on the input tag, attribute name(s) and associated attribute value(s), web application generator 205 relies on a particular "rule" (or fixed formula) within web application server memory 325 to generate event handler code 620 and GUI code 625 (step 730).

Chiang's handler code controls the web application in order to transition from one state to another.

wherein the user interface class and the handler class cause the selected user interface features and associated states for the user interface features to be automatically generated when the user interface code is executed. See page 6 paragraph [0078]:

> Based on a request for the web application from a web browser, the web application server 100 dynamically binds graphical user interface (GUI) files with web application business logic objects at runtime in order to provide the web application to the web browser (step 535).

Note that interface features and states are automatically generated by the execution of any GUI. If a GUI did not have features and states generated upon execution, it would simply be a static image incapable of providing an interface to the system.

In regard to claim 2, the above rejection of claim 1 is incorporated. Chiang further discloses a developer user interface class system that *automatically* generates user interface . See FIG. 2 element 210, FIG. 4 element 405, and FIG. 6.

In regard to claim 3, the above rejection of claim 1 is incorporated. Chiang further discloses a developer handler class system that automatically provides modified states. See FIG. 2 element 215 and FIG. 4 element 415.

In regard to claim 5, the above rejection of claim 3 is incorporated. Chiang further discloses a site-specific handler class system that generates a site-specific handler class through the customization of a properties file. See page 5 paragraph [0071].

In regard to claim 8, Chiang discloses:

A method for generating user interface code comprising:

receiving a selection of a user interface feature for a user interface class; See page 2 paragraph [0010]:

> Modified **input files may then be received** by the web application server from the graphic designers or business analysts, and the modified input files are compiled and dynamically bound with the compiled web application source code at runtime.

...retrieving a handler associated with the user interface feature that includes one or more states; See page 2 paragraph [0010]:

> Further, based on work by web developers, the web application server **receives** web application business logic objects and **event handlers** from the web developers, and organizes the application framework code, web application business logic objects and event handler methods into web application source code.

...generating one or more code elements that cause a user display to be generated when executed that includes the user interface feature having the one or more states. See paragraph [0010] starting on page 1:

> In accordance with one embodiment of the web application generator, there is provided a method of **generating computer code** for a web application, and dynamically binding input files from graphic designers and source code from web developers, comprising the web application server receiving input files from graphic designers or business analysts, wherein the input files are at least one web application **graphical user interface**.

Chiang discloses a "web application generator" that *automatically* retrieves handlers and generates source code from input files. See page 4 paragraph [0052]).

> As illustrated in FIG. 6, the web application generator 205 reads the set of web application screens as the input 605 and generates web application source code 610 as the output. This web application source code output 610 comprises web application framework code 615, event handler code 620, graphical user interface (GUI) code 625, business logic foundation code 630 and additional files 635.

In regard to claims 9 and 10, the above rejection of claim 8 is incorporated. All further limitations have been addressed in the above rejection of claims 2 and 3, respectively.

In regard to claim 12, the above rejection of claim 8 is incorporated. All further limitations have been addressed in the above rejections of claim 5.

In regard to claim 15, Chiang discloses:

A system for generating software code comprising:

a primary code generator receiving one or more user selections for one or more classes and generating primary software code; See page 2 paragraph [0010]:

> In accordance with one embodiment of the web application generator, there is provided a method of generating computer code for a web application, and dynamically binding input files from graphic designers and source code from web developers, comprising the web application server receiving input files from graphic designers or business analysts, wherein the input files are at least one web application graphical user interface.

a developer code generator receiving the primary software code and one or more user selections from one or more developer classes and automatically generating developer software code; primary code editor... modifying said one or more of the classes; See page 2 paragraph [0010]:

> Further, based on work by web developers, the web application server receives web application business logic objects and event handlers from the web developers, and **organizes the application framework code, web application business logic objects and event handler methods into web application source code.**

Also see page 5 paragraph [0069]:

> Upon receipt of business logic foundation code 630 as an output from web application generator 205, web developers 215 assemble reusable object-oriented business components and write all the core business logic that drives the web application, and particularly its function.

An editor is inherently required in order to assemble and modify components and logic; otherwise any output would be the same as the input.

wherein the modifications made to said one or more classes by the primary code editor result in the generation of code that is backwards and forwards compatible with other tiers in a multi-tier architecture that includes the developer software code. See page 6 paragraph [0075]:

> When web developers 215 are finished preparing web application source code 610, web application source code 610 is either compiled or interpreted by the programming language compiler/interpreter in which the code is written (step 530).

Chiang also discloses a "layered" or multi-tier architecture in FIG. 4, elements 405, 415, and 420. Compatibility is inherently required otherwise compilation would fail.

In regard to claim 17, the above rejection of claim 15 is incorporated. All further limitations have been addressed in the above rejection of claims 1 and 8.

In regard to claim 18, the above rejection of claim 15 is incorporated. All further limitations have been addressed in the above rejection of claims 2 and 3.

In regard to claim 20, the above rejection of claim 15 is incorporated. All further limitations have been addressed in the above rejection of claims 1 and 8.

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

20. Claims 4, 11, 16, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiang and Myers as applied to claims 2, 9, and 15 above, in view of US 5,950,001 to Hamilton et al. (hereinafter "Hamilton").

In regard to claim 4, the above rejection of claim 2 is incorporated. Chiang further discloses site-specific modification of a user interface and customization for specific user sites (See page 5 paragraph [0071]). Chiang does not expressly disclose site-specific user interface features. However, Chiang discloses modification and

dynamic binding of modified code in order for a user interface to be customized (See page 2 paragraph [0010]). Further, Hamilton teaches that site-specific features of a user interface class can be configured to operate with existing classes through the use of a "customizer" (See column 2 lines 17-24). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Hamilton's customizer with Chiang's class system. One of ordinary skill would have been motivated to provide specific modifications according to the needs of a particular user (Hamilton column 1 lines 20-23).

In regard to claim 11, the above rejection of claims 8 and 9 are incorporated. All further limitations have been addressed in the above rejection of claim 4.

In regard to claims 16 and 19, the above rejection of claim 15 is incorporated. All further limitations have been addressed in the above rejection of claims 4 and 5, respectively.

21. Claims 6, 7, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiang as applied to claim 1 above, and further in view of U.S. Patent 6,041,312 to Bickerton et al. (hereinafter "Bickerton"), in view of U.S. Patent 6,115,690 to Wong (hereinafter "Wong"), in view of U.S. Patent 5,594,642 to Collins et al. (hereinafter "Collins"), in view of U.S. Patent 5,428,791 to Andrew et al. (hereinafter "Andrew"), in view of U.S. Patent 6,421,822 to Pavela (hereinafter "Pavela").

In regard to claim 6, the above rejection of claim 1 is incorporated. Limitations of this claim include various classes of the user interface class. Chiang further discloses a report user interface class on page 7 paragraph [0097]. Chiang does not expressly disclose further claimed classes. However, Bickerton teaches that object-oriented account management software uses numerous classes related to aspects of finance and accounting including accounts payable and receivable, general ledger, global user interface, order common, and purchase orders. See Abstract, column 2 lines 42-56, column 4 lines 36-50, and column 17 lines 33-43. Also, Wong teaches a user interface for displaying inventory and shipping information. See FIG. 64. Also, Collins teaches utility classes. See column 10 lines 36-38. Also, Andrew teaches template classes. See column 3 lines 15-18. Also, Pavela teaches that test classes are used for testing objects. See Abstract. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the various classes of the prior art with Chiang's user interface generation, in order to provide a modifiable business software generation development environment.

In regard to claim 7, the above rejection of claim 1 is incorporated. Chiang further discloses a report handler class on page 7 paragraph [0098]. All further limitations have been addressed in the above rejection of claim 6.

In regard to claims 13 and 14, the above rejection of claim 8 is incorporated. Chiang further discloses a report handler class on page 7 paragraph [0098]. All further limitations have been addressed in the above rejection of claims 6 and 7, respectively.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Derek Rutten whose telephone number is (571) 272-3703. The examiner can normally be reached on T-Th 6:00-6:30, F 6:00-10:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jdr

TUAN DAM
SUPERVISORY PATENT EXAMINER